

Service Aviation



SO FAR, SO GOOD : The five London flying boats of No. 204 (G.R.) Squadron on the River Hughli below Calcutta. They are on a cruise to Australia.

ment of Assistant Commandant of the R.A.F. College, Cranwell, from 1929 to 1931. He was promoted to Group Captain in 1932, and throughout 1933 attended a course at the Imperial Defence College. From January, 1934, to September, 1936, he served as a Deputy Director in the Air Ministry. He was promoted to Air Commodore in January, 1936.

The Production Wellington

PHOTOGRAPHS are published in this issue of the production model Vickers Wellington Mark I. Machines of this type, together with Bristol Blenheims (already in service) and Handley Page Hampdens (now well into production) will go to build up a strong striking force of fast twin-engined medium bombers—a feature greatly to be desired in any truly modern air arm.

The prototype Wellington was present at the R.A.F. Display in 1936. Second of the Vickers series to be built on the geodetic principle, it stimulated great technical interest not only on that account, but due likewise to its fine lines and ingenious tail and nose gun turrets which, however, as exhibited, were only temporary structures. The production machine, while retaining the same deep oval-section fuselage of the original model exhibits a number of improvements. Both nose and tail are comparatively square-cut and appear to be planned for the installation of Nash and Thompson multi-gun turrets. There is still a disappearing mounting on top of the fuselage. The rear section of the fuselage is of deeper cross section; the retractable undercarriage has been re-designed; the tail wheel now retracts; special Vickers "dishpan" cowlings with cooling louvres reminiscent of those on American radials of a few years back and Canadian installations of to-day are incorporated; and the vertical tail surfaces have been revised.

Bristol Pegasus XVII radials with two-speed superchargers are

specified to power the Wellington I. This type of engine gives 900 h.p. (max.) at 17,750ft. and 980 h.p. for take-off.

Dimensions of the Wellington I are 86ft. 1in., length 6ft., and height 18ft. 6in.

Deflection

A MOST disturbing bugbear which confronted armament technicians as the speed of military aircraft rose above 200 m.p.h.—the problem of training free guns—has been routed by the introduction of some ingenious power-driven gun turrets as typified by the Nash and Thompson models specified for some of the latest British machines. But life is far from easy for the ballisticians, who are now confronted with what threatens to become an even more formidable obstacle—the deflection of bullets fired at an angle to the line of flight.

On the Continent the problem came into prominence during firing trials from the French *multiplace de combat* machines at Cazaux, the proving ground of French aircraft. It was discovered that, although some most impressive arcs of fire were obtainable on paper, the deflection of bullets fired broadside detracted very seriously from their fighting value.

The logical step to take against this phenomenon is to increase the muzzle velocity of the bullets. This could be achieved by lengthening the gun barrel or increasing the propulsive charge, both of which measures have obvious limitations.

The large orders which have been placed for power-driven turrets in this country might indicate that *l'effet de Cazaux* might not be so serious where small-bore, high-velocity guns are concerned, as is extensively believed, but, whatever the true facts, it seems that deflection of bullets and shells may be a prominent factor in determining the value of multi-seater fighters with free armament.

Royal Air Force Gazette

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General Duties Branch

The following Flying Officers are promoted to the rank of Flight Lieutenant (December 6):—F. C. Richardson, N. de W. Boulton, W. A. Theed.

Lt. Cdr. L. G. Richardson, R.N., Sqdn. Ldr., R.A.F., ceases to be attached to the R.A.F. on return to Naval duty (December 13); Capt.

B. W. de Courcy-Ireland, R.M., Flt. Lt., R.A.F., ceases to be attached to the R.A.F. on return to duty with the Royal Marines (October 1).

Chaplains Branch

The Rev. G. W. N. Groves, A.L.C.D., is granted a permanent commission (November 1); the Rev. T. D. Barr is granted a short service commission with the relative rank of Squadron Leader, with effect from December 14.



MORE SQUADRON BADGES : Some further designs approved by His Majesty the King. Others appear on the next page. Chester Herald's descriptions are as follows: No. 11 (Bomber) Squadron: Two eagles volant in pale. No. 13 (Army Co-operation) Squadron: In front of a dagger a lynx's head affrontee. No. 14 (Bomber) Squadron: A winged plate charged with a cross throughout and surmounted by the head and shoulder pieces of a suit of armour. No. 20 (Army Co-operation) Squadron: In front of a rising sun an eagle, wings elevated, perched on a sword.